

CLAIMS

What is claimed is:

1. An apparatus comprising:

a wireless access communication unit to couple a central telephone switch to a wireless cellular communications network using a wireless trunk; and

a trunk interface unit to couple the wireless access communication unit to the central telephone switch,

wherein the wireless access communications unit routes calls from user stations coupled to the central telephone switch to the wireless cellular communications network in response to a command received from the central telephone switch. .
2. The apparatus of Claim 1, wherein the trunk interface couples the wireless access communication unit to the central telephone switch using a wired trunk and couples the wireless access communication unit to the wireless cellular communications network using a wireless trunk.
3. The apparatus of Claim 1, wherein the command received from the central telephone switch is based on a dialed number for the call received from the user station.
4. The apparatus of Claim 1, wherein the wireless access communication unit comprises:

a plurality of subscriber ports connected to the trunk interface using a plurality of trunks;

a subscriber interface connected to each subscriber port;

a radio transceiver to communicate with the wireless cellular communications network; and

a controller connected to the user interfaces and the radio transceiver, the controller managing the transfer of data between the subscriber interfaces and the radio transceiver.

5. The apparatus of Claim 4, wherein the controller is further to convert data received from a user station through a subscriber port to a format suitable for wireless transmission using the radio transceiver.

6. The apparatus of Claim 1, wherein the trunk interface comprises an interface to a plurality of trunks to the central telephone switch, and wherein the wireless access communication unit registers each trunk with the wireless cellular communications network so that each trunk appears as a subscriber to the wireless cellular communications network.

7. The apparatus of Claim 1, wherein the wireless access communication unit performs off-hook detection for outgoing calls and supports provision of a dial tone to the central telephone switch.

8. The apparatus of Claim 7, wherein the wireless access communication unit further initiates acquisition of a wireless communication channel on the wireless communications network and detects dialed address digits from a user station and passes the received digits via call control signaling to the wireless communications network.

9. The apparatus of Claim 7, wherein the wireless access communication unit detects off-hook transitions from the switch and initiates call release procedures towards the wireless communications network in response to the detected off-hook transition.

10. The apparatus of Claim 1, wherein the wireless access communication unit further comprises a line manager to handle communication between the wireless access communication unit and the switch including call signaling, dialed digit recognition, and transfer of collected dialed digits.

11. The apparatus of Claim 10, wherein the wireless access communication unit further comprises an over-the-air manager coupled to the line manager to handle communication interface and link management to the base station.

12. A method comprising:
receiving a command from a central telephone switch at a wireless access communication unit, the switch being coupled to user stations;
routing calls from user stations coupled to the switch alternately to a wireless cellular communications network using a wireless trunk or to a wired switched telephone network in response to the received command.

13. The method of Claim 12, wherein receiving the command comprises receiving a dialed number from a user station through the switch.

14. The method of Claim 12, further comprising converting data received at the wireless access unit from a user station through the switch to a format suitable for wireless transmission to the wireless cellular communications network.

15. The method of Claim 12, further comprising registering trunk between the wireless access communications unit and user stations with the wireless cellular communications network so that each trunk appears as a subscriber to the wireless cellular communications network.

16. The method of Claim 12, further comprising at the wireless access communication unit performing off-hook detection for outgoing calls and provisioning of a dial tone to the switch.

17. The method of Claim 16, further comprising at the wireless access communication unit initiating acquisition of a wireless communication channel on the wireless communications

network and detecting dialed address digits from a user station and passing the received digits via call control signaling to the wireless communications network.

18. The method of Claim 16, further comprising at the wireless access communication unit detecting off-hook transitions from the switch and initiating call release procedures towards the wireless communications network in response to the detected off-hook transition.

19. A machine-readable medium having stored thereon data representing instructions which, when executed by a machine, cause the machine to perform operations comprising comprising:

receiving a command from a central telephone switch at a wireless access communication unit, the switch being coupled to user stations;

routing calls from user stations coupled to the switch alternately to a wireless cellular communications network using a wireless trunk or to a wired switched telephone network in response to the received command.

20. The medium of Claim 19, wherein receiving the command comprises receiving a dialed number from a user station through the switch.

21. The medium of Claim 19, further comprising instructions which, when executed by the machine, cause the machine to perform further operations comprising converting data received at the wireless access unit from a user station through the switch to a format suitable for wireless transmission to the wireless cellular communications network.

22. The medium of Claim 19, further comprising instructions which, when executed by the machine, cause the machine to perform further operations comprising performing off-hook detection for outgoing calls and provisioning of a dial tone to the switch.

23. An apparatus comprising:

a central telephone switch coupled to a plurality of user stations;

a wireless access communication unit to couple the central telephone switch to a wireless cellular telephone network using a wireless trunk; and

a trunk interface unit to couple the central telephone switch to a wired switched telephone network using a wired trunk and to couple the central telephone switch to the wireless access communication unit using a wired trunk,

wherein the central telephone switch routes calls from user stations alternately to the wired switched telephone network or the wireless access communication unit through the trunk interface.

24. The apparatus of Claim 23, wherein the central telephone switch is configured to route a call alternately to the wired switched telephone network or the wireless access communication unit in response to a dialed number for the call received from the user station.

25. The apparatus of Claim 23, wherein the central telephone switch comprises a private branch exchange.

26. The apparatus of Claim 23, wherein the wireless access communication unit comprises:

a plurality of subscriber ports connected to the trunk interface using a plurality of trunks;

a user interface connected to each subscriber ports;

a radio transceiver; and

a controller connected to the user interfaces and the radio transceiver, the controller managing the transfer of data between the user interfaces and the radio transceiver.